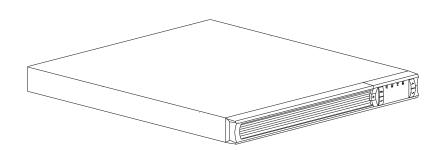
Smart-UPS™ Uninterruptible Power Supply

750/1000 VA, 120 VAC, Rack-Mount 1U

Operation Manual

EN TME22659 09/2023







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Important Safety Instructions

SAVE THESE INSTUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the Smart-UPS and batteries.



This is the "Read user manual" symbol. Read the user documentation to become familiar with the equipment.

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install or operate it.

The following special messages may appear throughout this document or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol either to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

♠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, **if not avoided**, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Product Handling Guidelines

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<18 kg <40 lb	18-32 kg 40-70 lb	32-55 kg 70-120 lb	>55 kg >120 lb		

Electrical equipment should be installed and operated only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

Safety and General Information

Inspect the package contents upon receipt. Notify the carrier and dealer if there is any damage.

Read the Safety Guide supplied with this unit before installing the UPS.

- · Adhere to all local and national electrical codes.
- · This UPS is intended for indoor use only.
- Do not operate this UPS in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- The battery typically lasts for two to five years. Environmental factors impact battery life. Elevated ambient temperatures, poor quality utility power, and frequent short duration discharges will shorten battery life.
- Connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.

Battery Safety

CAUTION

RISK OF HYDROGEN SULPHIDE GAS AND EXCESSIVE SMOKE

- Replace the battery at least every 5 years or at the end of its service life, whichever is earlier.
- Replace the battery immediately when the UPS indicates battery replacement is necessary.
- Replace batteries with the same number and type of batteries as originally installed in the equipment.
- Replace the battery immediately when the UPS indicates a battery
 overtemperature condition, or UPS internal overtemperature, or when there is
 evidence of electrolyte leakage. Power off the UPS, unplug it from the AC input,
 and disconnect the batteries. Do not operate the UPS until the batteries have
 been replaced.
- *Replace all battery modules (including the modules in External Battery Packs)
 which are older than one year, when installing additional battery packs or
 replacing the battery module(s).

Failure to follow these instructions could result in equipment damage and minor or moderate injury.

- *Contact APC Worldwide Customer Support to determine the age of the installed battery modules.
- Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.
- CAUTION: A battery can present a risk of electrical shock and high short-circuit current. Contact with any part of a grounded battery can result in electrical shock. The following precautions should be observed when working on batteries:
 - Wear rubber gloves and boots.
 - Do not lay tools or metal parts on top of batteries.
 - Disconnect charging source and load prior to installing or maintaining the battery.

- Remove battery grounds during installation and maintenance to reduce likelihood of shock.
- Remove the connection from ground if any part of the battery is determined to be grounded.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

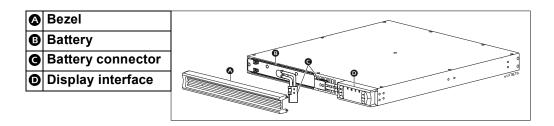
Product Description

The APC Smart-UPS is a high performance uninterruptible power supply (UPS). The UPS provides protection for electronic equipment from utility power blackouts, brownouts, sags, and surges, small utility power fluctuations and large disturbances. The UPS also provides battery backup power for connected equipment until utility power returns to safe levels or the batteries are fully discharged.

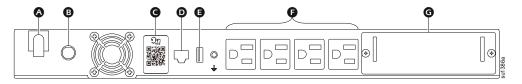
This user manual is available on our Web site, www.apc.com.

Product Overview

Front panel features



Rear panel features



- Input power cordOverload protector (Thermal circuit breaker)QR Code for downloading product information
- RJ45 connector serial port (for monitoring the UPS)
- USB port
- Outlets
- **⊚** Smart slot for optional accessory card

Specifications

Environmental

For additional specifications, refer to our Web site www.apc.com.

Temperature Operating		0 to 40 °C (32 to 104 °F)	
Storage		–15 to 45 °C (5 to 113 °F)	
		Charge UPS battery every six months	
Maximum Operating		3,000 m (10,000 ft)	
Elevation Storage		15,000 m (50,000 ft)	
Humidity		0% to 95% relative humidity, non-condensing	
International Protection Code		IP20	

Battery

	SMT750RM1U	SMT1000RM1U
Battery Type Sealed, maintenance-fre		nance-free, Valve
	Regulated Lead	l-Acid battery
Replacement battery module	APCRBC190	APCRBC215
This UPS has replaceable battery modules.		
Refer to the appropriate replacement battery user manual for installation instructions.		
Contact your dealer or go our Web site, www.apc.com for information on replacement batteries.		
Voltage for each battery module	6 V	
Total battery voltage for the UPS	24 V	
Ah rating 9 Ah		_

Installation

UPS



For UPS installation information, refer to the Smart-UPS Installation Guide that is included with the UPS. The guide is also on our Web site www.apc.com.

Network Management Card



For installation information, refer to the user manual provided with the Network Management Card (NMC). The user manual is also available on the APC Web site www.apc.com.

Operation

Connect Equipment to the UPS

CAUTION

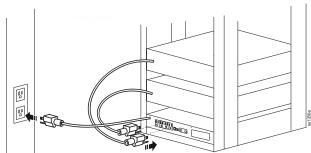
RISK OF ELECTRIC SHOCK

- · Adhere to all local and national electrical codes.
- Wiring should be performed by qualified electrician.
- · Always connect the UPS to a grounded outlet.

Failure to follow these instructions could result in minor or moderate injury.

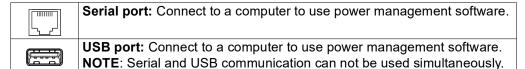
Note: The UPS will charge to 90% capacity in the first three hours of normal operation. **Do not expect full battery runtime capability during this initial charge period.**

- Connect equipment to the outlets on the rear panel of the UPS.
- Connect the UPS to the building utility power.
 Always connect the UPS to a two pole, three wire, grounded source.
- To use the UPS as a master ON/OFF switch, turn on all the equipment that is connected to the UPS.



- 4. Press the UPS OUTPUT ON/OFF button on the front panel of the UPS to turn ON the UPS and all connected equipment.
- 5. See "Outlets" on page 13 for details on configuring the outlets.

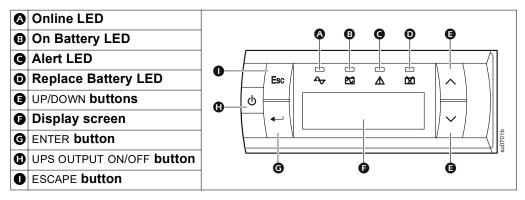
Basic Connectors



Note: An USB driver is required to communicate with PowerChute over USB. For more information, refer to Knowledge Base article FAQ000245947 on the Schneider Electric website (https://www.se.com/ww/en/faqs/home/).

Display Interface

Overview



Display interface operation

Press either the ESC or ENTER buttons to access the main menu.

Use the UP/DOWN buttons to scroll through menu options.

Press ENTER to view sub menus. Scroll through the list of options. Press ENTER to select an option.

Press ESCAPE to exit a sub menu and return to a main menu.

Menu overview

The display interface has Standard and Advanced menu screens. The preference for Standard or Advanced menu options is made during initial installation and can be changed at any time using the Configuration menu.

Standard menus are the most commonly used menus. The default screen shows Load and Battery Capacity bar graphs.

The Advanced menus include more status information and additional sub menus. The default screen shows scrolling status information.

Note: Actual menu screens may differ by model and firmware revision.

Main Man:	Dioplay Description	Standard	Advanced
Main Menu	Display Description	Option	Option
Status	Operating mode*	Х	Х
* Advanced menu	Efficiency	Х	Х
Status items	Load power (W)*	Х	Х
displayed as	Load power (VA)*	Х	Х
scrolling	Load amperage		Х
information	Load energy meter		Х
illioilliation	Battery charge state%	Х	Х
	Battery runtime*	Х	Х
	Battery voltage		Х
	Battery temperature	Х	Х
	Input voltage and frequency*	Х	Х
	Output voltage and frequency*	Х	Х
Control	UPS control		Х
Configuration	Language	Х	Х
	Output voltage setting (if applicable)		Х
	Power quality	Х	Х
	Menu type	Х	Х
	Audible alarms	Х	Х
	Display mode	Х	Х
	Sensitivity		Х
	Low voltage transfer points		Х
	High voltage transfer points		Х
	Low battery alert threshold		Х
	Automatic self test interval		Х
	Battery install date	Х	Х
	Reset energy meter		Х
	Enter set-up wizard		Х
	Reset to factory defaults	Х	Х
	Configure outlets		Х

Main Menu	Display Description	Standard	Advanced
		Option	Option
Test and	UPS self test	X	X
Diagnostics	UPS alarms test	X	Х
	UPS calibration test	Х	Χ
Logs	Event Logs		Х
About	UPS model	Х	Х
	UPS part number	Х	Х
	UPS serial number	Х	Х
	UPS manufacture date	Х	Х
	Battery part no.	Х	Х
	Battery install date	Х	Х
	Replace battery by	Х	Х
	Running UPS FW	Х	Х

Configuration

UPS Settings

Start up settings

At initial start up use the Setup Wizard to configure the following settings.

Function	Factory Default	Options	Description
Language	English	• English	The language for the display interface.
		French	Language options will vary by model.
		German	
		• Spanish	
		• Italian	
		• Portuguese	
		Japanese	
Local Power	Good	• Good	Select the desired utility input power
Quality		• Fair	quality.
		• Poor	Good: The UPS will go on battery power more often to provide the cleanest power supply to connected equipment.
			 Fair: The UPS will tolerate some voltage fluctuations before switching to battery power.
			Poor: The UPS will tolerate more voltage fluctuations and will go on battery power less often.
			The Power Quality setting will automatically change the high and low transfer points and the transfer sensitivity setting.
Menu Type	Standard	Standard	The Advanced menus include all
		Advanced	parameters. The Standard menus display a limited set of menus and options.

General settings

Configure these settings at any time, using the display interface or PowerChute $^{\mbox{\tiny TM}}$ software .

Function	Factory Default	Options	Description
Local Power Quality	Default Good	• Good • Fair • Poor	Select the desired utility input power quality. • Good: The UPS will go on battery power more often to provide the cleanest power supply to connected equipment. • Fair: The UPS will tolerate some voltage fluctuations before switching to battery power. • Poor: The UPS will tolerate more voltage fluctuations and will go on battery power less often. The Power Quality setting will
High Transfer	127 Vac	• 127 Vac • 130 Vac	automatically change the high and low transfer points and the transfer sensitivity setting. To avoid unnecessary battery usage, the high and low transfer points can
Point Low Transfer Point	106 Vac	• 136 Vac • 97 Vac • 103 Vac • 106 Vac	 be adjusted. Set the transfer point higher if the AC voltage is chronically high. Set the transfer point lower if the AC voltage is chronically low.
Transfer Sensitivity	Normal	Normal Reduced	When the Power Quality setting is changed the high and low transfer points will automatically be adjusted. Set the sensitivity to a level that is appropriate for the connected equipment.
		• Low	 Normal: The UPS will go on battery power more often to provide the cleanest power supply to the connected equipment. Reduced: The UPS will tolerate some voltage fluctuations before switching to battery power. Low: The UPS will tolerate more voltage fluctuations and will go on battery power less often.
			When the Power Quality setting is changed the transfer sensitivity will automatically be adjusted.
Low Battery Warning	2 min	• 2 min • 5 min • 7 min • 10 min	The UPS will emit an audible alarm when the remaining runtime has reached this level.

Function	Factory Default	Options	Description
Audible Alarm	On	• On • Type 1 • Type 2	On: Audible alarm is sounded immediately upon failure of utility and for low battery condition.
		• Off	Type 1: Alarm is not sounded until the utility failure has lasted for more than 30 seconds. Low battery warning operates normally.
			Type 2: Alarm is sounded for low battery conditions only.
			Off: Audible alarm is disabled under all conditions.
Display Mode		Always On Auto Off	The display interface remains continuously illuminated.
			The display interface illumination will extinguish after two minutes of inactivity.
Auto	On start	Start up + 14 days	The interval at which the UPS will
Self-Test Interval	up and 14 days after each self-test.	Start up + 7 daysOn start up onlyNever	execute a self-test. The batteries must be charged to at least 26 V to perform a self-test. "Start up" on these menus refers to
Reset to	No	• Yes	any time the UPS is turned on.
Factory	INO	• Yes	Restore the UPS factory default settings.
Default		- 140	Ŭ

Outlets

Overview

The UPS Outlet can be configured to perform the following actions:

- **Turn off**: Disconnect from power immediately and restart only with a manual command.
- Turn on: Connect to power immediately.
- **Shutdown**: Disconnect power, and automatically reapply power when utility power becomes available.
- Reboot: Shut down and restart.

Configure the Outlets

- 1. Connect equipment to the Outlets.
- 2. Use the **Configuration** menu to configure how the Outlets will react in the event of a power outage.

Use the **Configuration** menu to change the Outlet settings.

Function	Factory	Options	Description
	Default		
Turn On Delay	0 sec	• 0 sec • 60 sec • 180 sec • 300 sec	The amount of time the UPS or Outlets will wait between receiving the command to turn on and the actual startup.
Turn Off Delay	20 sec	• 20 sec • 180 sec • 300 sec • 600 sec	The amount of time that the UPS or Outlets will wait between receiving the command to turn off and the actual shut down.
Reboot Duration	0.0 hr	Set the value in steps of 0.1 hr	The amount of time that the UPS must remain off before the turn on delay.
Minimum Return Capacity	0 %	• 0% • 15% • 50% • 90%	The amount of battery capacity that must be available before the UPS will turn on.

Network Management Card Settings

These settings are available only on units that have a Network Management Card (NMC) and are set in the factory. These settings can only be modified using an external interface, like the NMC web interface.

- NMC IP Address Mode
- NMC IP Address
- NMC Subnet Mask
- · NMC Default Gateway

Troubleshooting

Problem and Possible Cause	Solution
The UPS will not turn on or there is	
The UPS has not been turned on.	Press the ON button once to turn on the UPS.
The UPS is not connected to utility	Ensure that the power cable is securely connected to the unit and to
power.	the utility power supply.
The input circuit breaker has tripped.	Reduce the load to the UPS, disconnect nonessential equipment and
	reset the circuit breaker.
The unit shows very low or no input	Check the utility power supply to the UPS by plugging in a table lamp.
utility voltage.	If the light is very dim, check the utility voltage.
The UPS has detected an internal	Do not attempt to use the UPS. Unplug the UPS and have it serviced
fault.	immediately.
The UPS is operating on battery, when the ups is operating on battery, when the ups is a second control of the ups is a second control of the ups is operating on battery.	
The input circuit breaker has tripped.	Reduce the load to the UPS, disconnect nonessential equipment and reset the circuit breaker.
There is very high, very low, or	Move the UPS to a different outlet on a different circuit. Test the input
distorted input line voltage.	voltage with the utility voltage display. If acceptable to the connected equipment, reduce the UPS sensitivity.
The UPS is beeping	
The UPS is in normal operation.	None. The UPS is protecting the connected equipment.
UPS does not provide expected bac	ckup time
The UPS battery is weak due to a	Charge the battery. Batteries require recharging after extended
recent outage or is near the end of its	outages and wear out faster when put into service often or when
service life.	operated at elevated temperatures. If the battery is near the end of its
	service life, consider replacing the battery even if the replace battery
	indicator is not yet illuminated.
The UPS is experiencing an overload condition.	Check the UPS load display. Unplug unnecessary equipment, such as printers.
Display interface LEDs flash seque	ntially
The UPS has been shut down	None. The UPS will restart automatically when AC power returns.
remotely through software or an	
optional accessory card.	
	PS displays a message and emits a constant beeping
The UPS is overloaded.	Reduce the load to the UPS, disconnect nonessential equipment.
The UPS has detected an internal	Do not attempt to use the UPS. Turn the UPS off and have it serviced
fault.	immediately.
The replace battery LED is illuminated	
The battery has a weak charge.	Be sure to charge the battery for upto 24 hours during first installation.
	• Allow the battery to recharge for at least four hours. Then, perform a Self-Test. If the problem persists after recharging, replace the battery.
The replacement battery is not	Ensure that the battery connector is securely connected.
properly connected.	

Service

If the unit requires service, do not return it to the dealer. Follow these steps:

- 1. Review the Troubleshooting section of the manual to eliminate common problems.
- 2. If the problem persists, contact Customer Support through the Web site, www.apc.com.
 - a. Note the model number and serial number and the date of purchase. The model and serial numbers are located on the rear panel of the unit and are available through the LCD display on select models.
 - b. Call APC Worldwide Customer Support and a technician will attempt to solve the problem over the phone. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).
 - c. If the unit is under warranty, the repairs are free.
 - d. Service procedures and returns may vary internationally. Refer to our Web site www.apc.com for country specific instructions.
- 3. Pack the unit in the original packaging whenever possible to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.
 - a. Always DISCONNECT THE UPS BATTERIES before shipping. The United States Department of Transportation (DOT), and the International Air Transport Association (IATA) regulations require that UPS batteries be disconnected before shipping. The internal batteries may remain in the UPS.
 - b. External Battery Pack products are deenergized when disconnected from the associated UPS product. It is not necessary to disconnect the internal batteries for shipping. Not all units utilize an external battery pack.
- 4. Write the RMA# provided by Customer Support on the outside of the package.
- Return the unit by insured, prepaid carrier to the address provided by Customer Support.

Transport the unit

- 1. Shut down and disconnect all connected equipment.
- 2. Disconnect the unit from utility power.
- 3. Disconnect all internal and external batteries (if applicable).
- 4. Follow the shipping instructions outlined in the Service section of this manual.

Limited Factory Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of two (2) years from the date of purchase. The SEIT obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. Repair or replacement of a defective product or part thereof does not extend the original warranty period.

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To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Customers with warranty claims issues may access the SEIT worldwide customer support network through our Web site: www.apc.com. Select your country from the country selection drop down menu. Open the Support tab at the top of the web page to obtain information for customer support in your region. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase.

APC Worldwide Customer Support

Customer support for this or any other APC product is available at no charge in any of the following ways:

- Visit the APC Web site to access documents in the APC Knowledge Base and to submit customer support requests.
 - -www.apc.com (Corporate Headquarters)
 Connect to localized APC Web sites for specific countries, each of which provides customer support information.
 - -www.apc.com/support/Global support searching APC Knowledge Base and using e-support.
- Contact the APC Customer Support Center by telephone or e-mail.
 - Local, country specific centers: go to www.apc.com/support/contact for contact information.
 - For information on how to obtain local customer support, contact the APC or the distributors from whom you purchased your APC product.

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